

A Rare Case of Fibroadenoma in Male Breast

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Abstract: We report a case of a twenty-two-year-old gentleman presenting with a swelling in right breast, eventually diagnosed as fibroadenoma. The diagnosis along with its mode of presentation and absence of any predisposing factors or associated features constitute a rarity in this age group.

Keywords: Fibroadenoma, Male breast

INTRODUCTION

Fibroadenomas are benign solid tumors composed of stromal and epithelial elements and fall in the category of nonproliferative disorders of the breast. It is a part of ANDI (Aberrations of Normal Development and Involution) [1]. Fibroadenoma is the second most common tumor in the breast (after carcinoma) and is the most common tumor in women younger than 30 years [2]. Fibroadenomas are seen and present symptomatically predominantly in younger women aged 15 to 25 years [3].

Fibroadenomas usually grow to 1 or 2 cm in diameter and then are stable but may grow to a larger size. Small fibroadenomas (≤ 1 cm in size) are considered normal, whereas larger fibroadenomas (≤ 3 cm) are disorders and giant fibroadenomas (>3 cm) are disease [1]. Similarly, multiple fibroadenomas (more than five lesions in one breast) are very uncommon and are considered disease [1]. Two subtypes of fibroadenoma are recognized. Giant fibroadenoma is a descriptive term applied to a fibroadenoma that attains an unusually large size (typically >5 cm) [2]. The term juvenile fibroadenoma refers to a large fibroadenoma that occasionally occurs in adolescents and young adults and histologically is more cellular than the usual fibroadenoma [2]. Although these lesions may display remarkably rapid growth, surgical removal is curative.

Fibroadenomas have abundant stroma with histologically normal cellular elements. They show hormonal dependence similar to that of normal breast lobules in that they lactate during pregnancy and involute in the postmenopausal period. Most fibroadenomas are self-limiting and many go undiagnosed, so a more conservative approach is reasonable, although neoplasia may develop in the

epithelial elements within them. Cancer in a newly discovered fibroadenoma is exceedingly rare; 50% of neoplasias that involve fibroadenomas are LCIS, 35% are invasive carcinomas, and 15% are intraductal carcinoma [2]. Careful ultrasound examination with core-needle biopsy will provide an accurate diagnosis. Ultrasonography may reveal specific features that are pathognomonic for fibroadenoma and in a young woman (e.g., under 25 years) where the risk of breast cancer is already very low a core-needle biopsy may not be necessary [1].

Cryoablation and ultrasound-guided vacuum assisted biopsy are approved treatments for fibroadenomas of the breast, especially lesions <3 cm. Larger lesions are often still best removed by excision [1]. With short-term follow-up a significant percentage of fibroadenomas will decrease in size and will no longer be palpable [4]. However, many will remain palpable, especially those larger than 2 cm [5]. Therefore, women should be counseled that the options for treatment include surgical removal, cryoablation, vacuum assisted biopsy, or observation.

CASE REPORT

A twenty-two-year-old gentleman presented to our outpatient department with swelling of right breast for the last 3 years. The swelling has gradually increased in size. He was experiencing pain over the swelling for the last 6 months. General survey was within normal limits. On local examination right breast was enlarged and non-tender. It was having a small firm lump with rubbery feel. The lump was mobile and measured 4 cm \times 3.5 cm in size. He was not having gynecomastia and the secondary sexual characters were normal. Several investigations were done viz. serum FSH, LH, testosterone and estradiol out of which serum

estradiol was raised and rest were within normal limits. USG guided FNAC came out to be Fibroadenoma. The lump was excised and sent for histopathological

examination. Report turned out as fibroadenoma of male breast with florid ductal hyperplasia.



Fig-1: Erect profile of the patient showing enlargement of right breast.



Fig-2: Supine profile of the patient showing right breast lump in upper outer quadrant.



Fig-3: Excision of fibroadenoma being performed



Fig-4: Excised specimen (cut open) showing white-greyish interior, lobulated with a whorl-like pattern.

DISCUSSION

The chief objective of outlining this case report was to highlight the rarity of the case. In addition there are few peculiarities in this case which attracts attention. In male breast incidence of gynecomastia is 45.5%, ductal cancer 18.2%, lipoma 12.1% and rest about 24% accounts for others e.g. cystic hygroma, cystic mastopathy, fibroadenoma, ductal papilloma, tuberculosis, periductal mastitis, primary primitive neuroectodermal tumor. Fibroepithelial lesions are uncommon in the male breast [6]. Gynecomastia and/or lobular differentiation have been known to coexist with male fibroadenoma and phyllodes tumor [7]. As there are no lobules in male breast, and hence fibroadenomas and cystosarcoma phyllodes are rarely found in male breast. Holleb *et al.* [8] questioned the occurrence of fibroadenoma in male breast. Some authors even described them to be nodular foci of gynecomastia [9]. Nonetheless, fibroadenomas in the male breast have been documented sporadically in the medical literature as single case reports and in a rare series of four patients [10,11]. The development of lobules apparently requires a certain length and or intensity of endogenous or exogenous estrogenic stimulation not frequently attained at the levels that commonly induce gynecomastia [12]. Multiple or bilateral fibroadenomas have not been reported in male breast [7]. Hormonal imbalance, some due to medication use, cause proliferative changes in male breast, such as gynecomastia, lobular differentiation, and fibroepithelial lesions [6]. Although, coexisting gynecomastia appears to be consistent finding in male patient with fibroadenoma, the presence of lobular differentiation with or without associated gynecomastia is less common [10,13].

It is known that the slight increase in plasma estrogen ratio observed in idiopathic prepubertal or senile gynecomastia, usually will not induce acinar and lobular formation in male breast [14,15] but full acini's and lobular formation will occur in transgenders in whom progestrogenic antiandrogens are combined with feminizing estrogen therapy [10,16]. Hence usually,

exogenous drugs/medications leads to development of gynecomastia or fibroadenoma or both in male breast, but very rarely these can develop even without exogenous drugs or medication. There were several peculiarities in our case like he didn't have gynecomastia, had no history of taking exogenous drugs or medications and there was florid ductal hyperplasia on HPE.

CONCLUSION

This case presented with a right breast lump (approximately 4 cm x 3.5 cm by size) without any coexisting or predisposing factors and it had become painful for last 6 months. FNAC diagnosed it to be fibroadenoma and it was decided to intervene surgically. Postoperative period was uneventful with a good recovery. HPE came out to be fibroadenoma of male breast with florid ductal hyperplasia. The rarity of the case along with some peculiarities prompted this report. Male patient with breast enlargement usually present late due to social stigma and also due to ignorance, so, usually treatment is delayed. Male breast carcinoma should always be excluded.

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